**3GPP TSG-RAN WG2#127 R2-24xxxxx**

**Maastricht, Netherlands, 19-23 August 2024**

**Title:** DraftLS on data block sizes for Ambient IoT

**Response to:**

**Release:** Release 19

**Work Item:** FS\_Ambient\_IoT\_solutions

**Source:** MediaTek [to be RAN2)

**To:** RAN1, SA2

**Cc:**

**Contact Person:**

**Name:** Nathan Tenny

**E-mail Address:** nathan.tenny@mediatek.com

**Send any reply LS to: 3GPP Liaisons Coordinator,** **mailto:3GPPLiaison@etsi.org**

**Attachments:** None

**1. Overall Description:**

RAN2 has discussed the role of the MAC in handling upper-layer data blocks (MAC SDUs) and processing them into transport blocks (MAC PDUs) and the need of segmentation in MAC layerRAN2 believes that RAN2 can define MAC PDU sizes to be aligned to the capacity of the physical layer/TBS sizes. To take an educated decision about the need for the segmentation in MAC, RAN2 would like to know the TBS sizes (in both D2R and R2D directions), RAN1 intendes to specify.

TR 38.848 and TS 22.369 states that a maximum “typical” message size of ~1000 bits is expected.RAN2 would understand what the maximum and typical size of application data could be expected in reality and if application layer would support segmentation to ensure maximal and typical size of application data to adapt to the maximum and typical data block sizes (both D2R and R2D directions).

RAN2 would like to observe that there may be benefit to aligning the minimum TB size across different device types, to allow a consistent design of the first messages sent in each direction during paging/access procedures.

**2. Actions:**

**To RAN1:**

RAN2 respectfully ask RAN1 to indicate what TB sizes are expected to be supportable in PHY, in both D2R and R2D directions andthe conditions under which TBs of different sizes can be transmitted.

**To SA2:**

RAN2 respectfully ask SA2 to feed back on the expected maximum and typical data block size delivered from upper layers to the AIoT AS layers, in both D2R and R2D directions.

**3. Date of Next RAN2 Meetings:**

TSG-RAN WG2 Meeting #127bis 14-18 October 2024 Hefei, CN

TSG-RAN WG2 Meeting #128 18-22 November 2024 Orlando, FL, US